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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,085	11/21/2001	Radomir Mech	MSI-1031US	1282

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EXAMINER

ARNOLD, ADAM

ART UNIT	PAPER NUMBER
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2671

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DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,085

Applicant(s)

MECH, RADOMIR

Examiner

Adam Arnold

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The examiner acknowledges the receipt and entry of the applicant's amendment.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-3, 5, and 11-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 7, 10, 12 and 13 of copending Application No. 09/991,526. Although the conflicting claims are not identical, they

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are not patentably distinct from each other because the applicant's claims have a one to one correspondence in limitations to the above claims found in Application No. 09/991,526.

Referring to claim 1, both this claim and claims 1 and 2 of Application No. 09/991,526 contain a method for rendering a scene comprising measuring a travel distance through a gaseous object, converting the gaseous object distance to a color component and blending the color component of the gaseous object with a color component of a non-gaseous object. This application does not refer to an alpha channel because the claims in this case are more general.

Referring to claim 2, the remarks presented above with respect to claim 1 apply equally to this claim. Although the other case does not refer to a linear distance, this is obvious in that determining a distance between objects is generally considered in a straight line.

Referring to claim 3, both this claim and claim 3 of Application No. 09/991,526 provide where the travel distance is measured by calculating the depth between the front and back faces of the gaseous object.

Referring to claim 5, both this claim and claim 7 of Application No. 09/991,526 provide for computer-executable instructions.

Referring to claim 11, both this claim and claim 12 of Application No. 09/991,526 provide where the graphical display system is a flight simulator.

Referring to claim 12, both this claim and claim 13 of Application No. 09/991,526 provide where the graphical display system is a game.

Referring to claim 13, both this claim and claim 10 of Application No. 09/991,526 provide for a display unit.

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Referring to claim 14, the remarks presented above with respect to claim 1 apply equally to this claim.

Referring to claim 15, the remarks presented above with respect to claim 3 apply equally to this claim.

Referring to claim 16, the remarks presented above with respect to claim 13 apply equally to this claim.

Referring to claim 17, the remarks presented above with respect to claim 5 apply equally to this claim.

Referring to claim 18, the remarks presented above with respect to claim 1 apply equally to this claim.

Referring to claim 19, the remarks presented above with respect to claim 3 apply equally to this claim.

Referring to claim 20, the remarks presented above with respect to claim 1 apply equally to this claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollis, U.S. Patent No. 6,580,430. Referring to claim 1, Hollis discloses a method for rendering a visual scene (col. 3, line 60) comprising measuring a travel distance through a gaseous object (col. 12, line 48), converting the gaseous object distance (col. 12, lines 46-47), and blending the color component of the gaseous object with a color component of a non-gaseous object to produce a pixel in the visual scene (col. 12, lines 44-45). Hollis does not disclose converting the gaseous object distance to a color component, but rather to a fog percentage based on travel distance. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to convert the gaseous object distance to a color component. One of ordinary skill in the art would have been motivated to do this in order to represent different atmospheric effects and more realistically simulates the effects of fog by using different combinations of fog colors and fog density values (see Hollis, col. 4, lines 20-21).

Referring to claim 2, Hollis discloses where the travel distances are linear distances (col. 10, lines 3-5).

Referring to claim 3, Hollis discloses where the travel distance is measured by calculating a depth of the gaseous object between front and back faces of the gaseous object from a reference point (col. 10, lines 4-5).

Referring to claim 4, Hollis discloses where converting the gaseous object distances employs a linear gaseous model (col. 10, lines 1-3).

Referring to claim 5, Hollis discloses one or more computer-readable media comprising computer-executable instructions (col. 6, line 47).

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Referring to claim 6, Hollis discloses where the blending of a color component from the gaseous object with the color component of a non-gaseous object generates a pixel with visual realism (col. 5, lines 43-55).

Referring to claim 7, Hollis discloses assigning a constant density to the gaseous object (col. 10, lines 2-3).

Referring to claim 8, the remarks presented with respect to claim 1, above, apply equally to this claim.

Referring to claim 9, Hollis discloses where the gas generator module is implemented as a software program layer operating in conjunction with computer hardware (col. 6, lines 45-52).

Referring to claim 10, Hollis discloses where the graphical display system is an interactive graphics machine (col. 6, line 41).

Referring to claim 11, Hollis discloses where the graphical display system might be a flight simulator (col. 3, line 21).

Referring to claim 12, Hollis discloses where the graphical display system is a game system (col. 6, line 49).

Referring to claim 13, Hollis discloses a display unit configured to display the final color to the user (col. 5, line 52).

Referring to claim 14, Hollis discloses using the distance as a variable (or attenuation factor), to determine the fog value as shown in claim 1 above.

Referring to claim 15, the remarks presented with respect to claim 3, above, apply equally to this claim.

Referring to claim 16, the remarks presented with respect to claim 13, above, apply equally to this claim.

Referring to claim 17, the remarks presented with respect to claim 5, above, apply equally to this claim.

Referring to claim 18, the remarks presented with respect to claim 1, above, apply equally to this claim.

Referring to claim 19, the remarks presented with respect to claim 3, above, apply equally to this claim.

Referring to claim 20, Hollis discloses determining a travel distance between the front and back face of an object (fog) as shown in the rejection to claim 3 above, and the standard means for determining this distance would be to subtract the distance between front and back points. Hollis does not disclose initializing the pixel color value, although it can be assumed that this value is at some point initialized during the calculation in Hollis. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to initialize the pixel color value. One of ordinary skill in the art would have been motivated to do this in order to receive a meaningful value from the fog calculation.

Referring to claim 21, Hollis discloses where the front distance value and the back distance value are determined using a linear equation (col. 10, line 5).

Referring to claim 22, Hollis discloses where the travel distance is converted to the fog factor by solving a linear equation (col. 10, line 5).

Referring to claim 23, Hollis discloses where the travel distance is converted to the fog factor by solving an exponential equation (col. 10, line 17).

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Referring to claim 24, Hollis discloses where the travel distance is converted to the fog factor by solving an exponential-squared equation (col. 10, line 18).

Referring to claim 25, the remarks presented with respect to claims 18, 19 and 20, above, apply equally to this claim.

Referring to claim 26, the remarks presented with respect to claims 21 and 25, above, apply equally to this claim.

Referring to claim 27, the remarks presented with respect to claims 22 and 25, above, apply equally to this claim.

Referring to claim 28, the remarks presented with respect to claims 23 and 25, above, apply equally to this claim.

Referring to claim 29, the remarks presented with respect to claims 24 and 25, above, apply equally to this claim.

Response to Arguments

5. Applicant's response with respect to the objection to claim 4 has been fully considered and is persuasive. The objection has been withdrawn.

6. Applicant's arguments regarding the double patenting rejection have been fully considered and are not persuasive. On page 23 of the response, the applicant quotes the rationale of the nonstatutory double patenting rejection, but omits the passage regarding harassment of

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multiple assignees. Regardless of current ownership, which can change in the future, avoiding potential harassment is an important motivation for the nonstatutory double patenting rejection and must be considered. The applicant further argues on the bottom of page 24 that the 2 applications were filed on the same day. This does not take into consideration that different patent dates can arise based on Patent Term Adjustment. Finally, on the bottom of page 24, the applicant quotes section 7.21.01 of the MPEP, entitled "Provisional Rejection, 35 U.S.C. 103(a), Common Assignee or at Least One Common Inventor." This refers to a 103 rejection and has nothing to do with Double Patenting.

7. Applicant's arguments filed January 27, 2004 have been fully considered. The arguments regarding the rejection to claim 1 are persuasive and the rejection has been withdrawn. The remaining arguments are unpersuasive. Regarding the rejection to claim 14, as referred to on page 27 of the applicant's response, the body of the office action contains the claim 14 rejection. The missing claim 14 on page 5 of the office action was a typographical error.

Regarding the rejection to claim 1, the applicant argues that the relevant limitations of Hollis are drawn from different portions of the invention and therefore fail to meet the requirements for anticipation. The examiner is unaware of any passage in the MPEP which requires that all the limitations in an anticipation reference must be in the same location. The applicant further contends that Hollis does not specifically provide for "converting the gaseous object distance to a color component." The examiner agrees with this contention. A new grounds for rejection has been provided.

Regarding the rejection to claim 8, in the last paragraph on page 31, the applicant appears to be arguing that claim 8 is allowable because claim 1 is allowable. Claim 8 is a version of

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claim 1 with slightly different wording. The “gaseous phenomena generator” can be found at col. 4, lines 48-49 of Hollis. The “attenuation factor” appears to be a variable based on travel distance, which is also a part of claim 1. As such, the remarks regarding the claim 1 rejection apply as well to claim 8.

Regarding the rejection to claim 14, the applicant again argues that the claim 1 limitations are not met by Hollis. Therefore, no further discussion of this issue is necessary.

Regarding the 103 rejection to claim 20, the applicant states in the 2d paragraph of page 33 that this claim is not disclosed by Hollis. Because the applicant does not describe which limitation of claim 20 is at issue, or give arguments to distinguish them, the claim 20 rejection given above appears adequate to refute the applicant’s claim. Finally, on pages 34 and 35, the applicant argues that it would not be obvious to initialize the pixel color value and no motivation has been identified in the references to modify the disclosures. It is unnecessary to provide motivation for modifying a reference, when the limitation is inherent in the claim. In this case, if the pixel color value is not initialized at some point, it would serve no purpose to the invention. It is inherent that this must take place.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Adam Arnold** whose telephone number is **703-305-8413**. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600